

Appl. No. 10/534,125  
Amdt dated August 4, 2006  
Reply to Office action of May 17, 2006

**DESCRIPTION OF THE AMENDMENTS TO THE DRAWINGS:**

Attached to this amendment is a sheet of replacement drawings which corrects the informalities which were noted in paragraph 2 of the Office action, and further detailed on the form PTO-948 which was attached to the first Office action.

**REMARKS**

Claims 11-30 remain in this application.

The drawings have been revised to remove the informalities noted on form PTO-948.

Claims 11, 17-20, 29 and 30 have been amended to remove the informalities noted by the examiner in paragraph 3 of the Office action.

Regarding the Berriman et al and Krutzsch et al references, although both Berriman et al and Krutzsch et al show a method and apparatus of reducing the nitrogen oxides in the exhaust gasses of an engine, the references to Berriman et al and Krutzsch et al both lack the second auxiliary agent chemically converted from the first auxiliary agent and then the second auxiliary agent is stored in an intermediate reservoir for later delivery to the exhaust gas separate from the first auxiliary agent delivery to the exhaust gas.

The Krutzsch reference merely shows a process and method for reducing nitrogen oxides where HC or hydrogen is added to the exhaust gases.

The Berriman et al reference describes an exhaust gas after treatment system for the reduction of nitrogen oxides that uses ammonia as a precursor for the injection of ammonia,  $\text{NH}_2$ , and  $\text{NH}$ . The activation of ammonia, i.e. the decomposition of ammonia into  $\text{NH}_2$  and  $\text{NH}$  is performed in a housing 132 which is part of the injector 130, column 5, lines 29-31. Thus, in Berriman et al there is no alternative to injecting all three of ammonia,  $\text{NH}_2$  and  $\text{NH}$ . There is only one mode of injection, an injection of a mixture of ammonia with an amount of decomposed ammonia, column 5, lines 4-9. Clearly the Berriman et al reference does not show an intermediate reservoir or storage tank for a second auxiliary agent, out of which

intermediate reservoir , on explicit demand, a desired amount of a second auxiliary agent could be injected in addition to, or as an alternative to a first auxiliary agent.

The examiner indicated in his rejection, paragraph 5 of the Office action, that in Berriman et al a second auxiliary agent is stored in an intermediate reservoir 140. Contrary to this, in Berriman et al 140 is not an auxiliary reservoir. Instead 140 is recited to represent particles of catalytic material, see Berriman at column 5 lines 33-34. **Nowhere in the Berriman et al reference is there mention of an intermediate reservoir. And nowhere in their disclosure does Berriman et al ever indicate that the secondary agent is stored.** Any amount of secondary agent which is created by use of the catalytic material 140 is used immediately, without any kind of storage. It is injected into the exhaust stream through injector 130.

The examiner has indicated, in paragraph 7 of the Office action, that Krutzsch et al teaches converting a hydrogen producing fluid (water, methanol or HC) to a chemical conversion into a second auxiliary agent storing the secondary agent in reservoir 6, and at least intermittently delivering the second agent. This is not the same as recited in claim 11, in that claim 11 recites delivering a first agent to the exhaust gas, **subjecting the first agent to a chemical conversion to make a second agent**, storing a quantity of the second agent, and delivering the second agent to the exhaust. In the teaching of Krutzsch et al, a first agent is never converted to a second agent. HC generator 5 creates the first agent. H<sub>2</sub> generator 6 creates the second agent. And the first agent is never, in any way, converted to the second agent under the teachings of Krutzsch et al.

Further, Krutzsch et al never teaches that generator 6 stores the second agent.

The examiner has applied Akama et al in an effort to fill the deficiencies of Krutzsch et al. But Akama et al does not teach using a first agent, and also converting a portion of this first agent to a second agent, with or without intermittently supplying the second agent to the exhaust line. Akama et al apply only one agent to the exhaust line.

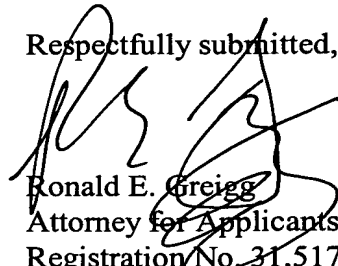
Furthermore, neither of Krutzsch et al or Akama et al teach anything whatsoever to do with converting ammonia to or from another agent as recited in claims 21-28.

Thus, none of the prior art cited and applied by the examiner teaches or makes obvious the method as recited in claims 11-29, or the structure recited in claim 30 of this application.

For the above reasons, entry of the amendment and allowance of the claims are courteously solicited.

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Respectfully submitted,



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